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Claims

1.   A radio base station comprising a monitor (31), memory (33, 49) and one or more
resources (35(i), 37(j), 39(k), 41(m), 43(n), 45(o), 47(p)), said memory (33, 49) being
5   connected to the monitor (31) and arranged for storing tasks and data, each of said
resources (35(i), 37(j), 39(k), 41(m), 43(n), 45(o), 47(p)) being connected to the
monitor (31) and arranged for at least one of performing a function and executing a
program, wherein the radio base station comprises at least one analogue signal
manifold (39(k)) comprising input lines, output lines, and nodes for making
10   connections between input and output lines, said input lines and output lines being
connectable to predetermined resources and said nodes being arranged to perform at
least a mathematic operation on an incoming signal on the input lines.

2.   Radio base station according to claim 1, wherein said resources (35(i), 37(j),
15   39(k), 41(m), 43(n), 45(o), 47(p)) that are arranged to execute a program are also
arranged to generate trigger signals and send them to the monitor (31), said monitor
(31) being arranged to receive said trigger signals, to read one or more tasks related to
said trigger signals from said memory (33, 49), to check whether resources required for
performing said task are available and sending commands to selected resources
20   specifying the task to be performed.

3.   Radio base station according to claim 1, wherein connections between said
memory (33, 49) and said monitor (31), and between said resources (35(i), 37(j), 39(k),
41(m), 43(n), 45(o), 47(p)) and said monitor are implemented by means of a bus (51).
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4.   Radio base station according to claim 3, wherein said resources (35(i), 37(j),
39(k), 41(m), 43(n), 45(o), 47(p)) are arranged for mutual communication via said bus
(51).

30   5.   Radio base station according to claims 3 or 4, wherein using the bus (51) is based
on a datagram principle.

6.   Radio base station according to any of the preceding claims, wherein said
memory (33, 49) comprises a task memory (33) and a data memory (49).

7.   Radio base station according to any of the preceding claims, wherein said
5   monitor (31) comprises a state machine sequencer (79) for handling several state
machines in parallel.

8.   Radio base station according to claim 7, wherein said memory comprises a ROM
portion (61) and a RAM portion (59), said ROM portion (61) storing state machine
10   definitions for said state machine sequencer (79), task definitions and default structures,
said RAM portion (59) storing dynamic data.

9.   Radio base station according to claim 8, wherein said RAM portion (59) stores a
resource allocation table (63), a data block list (65), and data blocks (67).

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10.   Radio base station according to any of the claims 1-8, wherein said monitor (31)
comprises an executor (77) arranged for:
●   sending commands to resources;
●   sending task block requests to memory (33, 49);
20   ●   receiving status information from resources;
●   receiving task blocks from memory (33, 49).

11.   Radio base station according to claim 9, wherein said monitor (31) comprises an
executor (77) arranged for:
25   ●   sending commands to resources;
●   sending task block requests to memory (33, 49);
●   receiving status information from resources;
●   receiving task blocks from memory (33, 49);
●   maintaining said resource allocation table (63).

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12.   Radio base station according to any of the preceding claims, wherein said
resources comprises at least one of: a transmitter (35(i)), a receiver (37(j)), a digital

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analogue converter (41(m)), an analogue digital converter (43(n)), a control unit (45(o)), and a digital signal processor (47(p)).

13.   Radio base station according to claim 12, wherein said resources comprise at least one digital signal processor (47(p)) storing an executable image for performing a program.

14.   Radio base station according to any of the claims 12, 13, wherein said resources comprise a plurality of transmitters (35(i)), a plurality of receivers (37(j)), a plurality of digital analogue converters (41(m)), and a plurality of analogue digital converters (43(n)), said at least one analogue signal manifold (39(k)) being arranged for making connections between said plurality of transmitters (35(i)) and said plurality of digital analogue converters (41(m)), and between said plurality of receivers (37(j)) and said plurality of analogue digital converters (43(n)).

15.   Radio base station according to any of the preceding claims, wherein said mathematic operations comprise at least one of multiplying, adding, subtracting, and one-to-one connecting.

16.   Method of operating a radio base station comprising a monitor (31), memory (33, 49), one or more resources (35(i), 37(j), 39(k), 41(m), 43(n), 45(o), 47(p)) and at least one analogue signal manifold (39(k)), said memory (33, 49) being connected to the monitor (31) and storing tasks and data, each of said resources (35(i), 37(j), 39(k), 41(m), 43(n), 45(o), 47(p)) being connected to the monitor (31), said at least one analogue signal manifold (39(k)) comprising input lines, output lines, and nodes for making connections between input and output lines, said input lines and output lines being connectable to predetermined resources, said method comprising:

- at least one of performing a function and executing a program by said resources (35(i), 37(j), 39(k), 41(m), 43(n), 45(o), 47(p)),
- reading one or more tasks from said memory (33, 49),
- checking whether resources required for performing said one or more tasks are available and
- sending commands to selected resources specifying the task to be performed;

- connecting one or more input lines with one or more output lines of the analogue signal manifold (39(k)) by means of said nodes and performing at least a mathematic operation on an incoming signal on the input lines in said nodes.

5   17.   Computer program product storing instructions and data to be loaded by a radio base station comprising a monitor (31), memory (33, 49), one or more resources (35(i), 37(j), 39(k), 41(m), 43(n), 45(o), 47(p)) and at least one analogue signal manifold (39(k)), said memory (33, 49) being connected to the monitor (31) and storing tasks and data, each of said resources (35(i), 37(j), 39(k), 41(m), 43(n), 45(o), 47(p)) being

10   connected to the monitor (31), said at least one analogue signal manifold (39(k)) comprising input lines, output lines, and nodes for making connections between input and output lines, said input lines and output lines being connectable to predetermined resources, said computer program product, after being loaded, allowing said monitor (31) to:

15   ● read one or more tasks from said memory (33, 49),
     ● check whether resources required for performing said one or more tasks are available and
     ● send commands to selected resources specifying the task to be performed.
     ● send a command to said analogue signal manifold (39(k)) to connect one or more

20   input lines with one or more output lines and to perform at least a mathematic operation on an incoming signal on one or more input lines.

     18.   A data carrier comprising a computer program product according to claim 17.

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